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A.C.E.C.

ENVIRONMENTAL SITE ASSESSMENT

FOR

BECTON DICKINSON DIAGNOSTICS, INC.
CAYEY, P.R.

CONFIDENTIAL

PP&A PROJECT #91010
APRIL, 1991

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EXECUTIVE SUMMARY

Becton Dickinson Diagnostic, Inc. (BDDI) plans to acquire the facility used by L.H. Caribe in Cayey P.R. These facilities are owned by Puerto Industrial Development Corp.(PRIDCO) and are presently vacant.

Based on a field inspection three areas of concern were identified. These were solvents soil contamination, underground tank and septic system, and presence of asbestos. The study included sampling and historical review.

The land was originally used for agriculture. In 1973 PRIDCO developed an Industrial Park. In 1979 a building was built for L.H. Caribe, Inc. L.H. Caribe manufactured power supplies. The building was used for final assembly and testing. L.H. Caribe had very little information (or no information) in the Government Agencies. In the Environmental Quality Board (EQB) only the Hazardous Waste Division had information.

Laboratory results do not reflect significant problems. There are, however, five areas of concern. These are under ground diesel tank, septic tank and injection wells, EQB Hazardous Waste Inspection, asbestos, small diesel spill. PRIDCO is taking care of the underground diesel tank and septic tank system.

The EQB Hazardous Waste Division closed the file of L.H. Caribe. Soil samples of the area shows no problem where the small diesel spill occurred. The "fascia" containing asbestos should be encapsulated or removed.

Based on the findings we recommend BDDI to proceed the negotiation with PRIDCO. Becton Dickinson's legal councel should assure that PRIDCO retains future liability on these and other issues that may arise and that were not evident now.

SECTION-2 INTRODUCTION

2.1 Authorization

Becton Dickinson Diagnostics, Inc. (BDD), plans to acquire a new facility across the street from present location. The property is owned by Puerto Rico Industrial Development Co. (PRIDCO), and was previously leased by L.H. Caribe [1], Inc., for the assembly of power supplies (see Figure No.1). The facilities are presently vacant. **BDD** desires to verify that the site has not been contaminated with hazardous waste. This study investigates this and other related environmental issues.

This study was requested by Mr. Alejandro Blanco, Plant Manager, Becton Dickinson Diagnostic, Inc. from Pedro Panzardi & Associates (PP&A), in accordance with the Scope of Work in the proposal of January 17, 1991. **BDD** had specified as a purchase condition that this facility should not have hazardous waste in the site.

Hazardous wastes are generally petroleum products, residues of chemical processes, toxins, etc. A site may contain such materials due to activities formerly conducted there, and by virtue of "dumping" or subterranean migration of contaminants through ground water.

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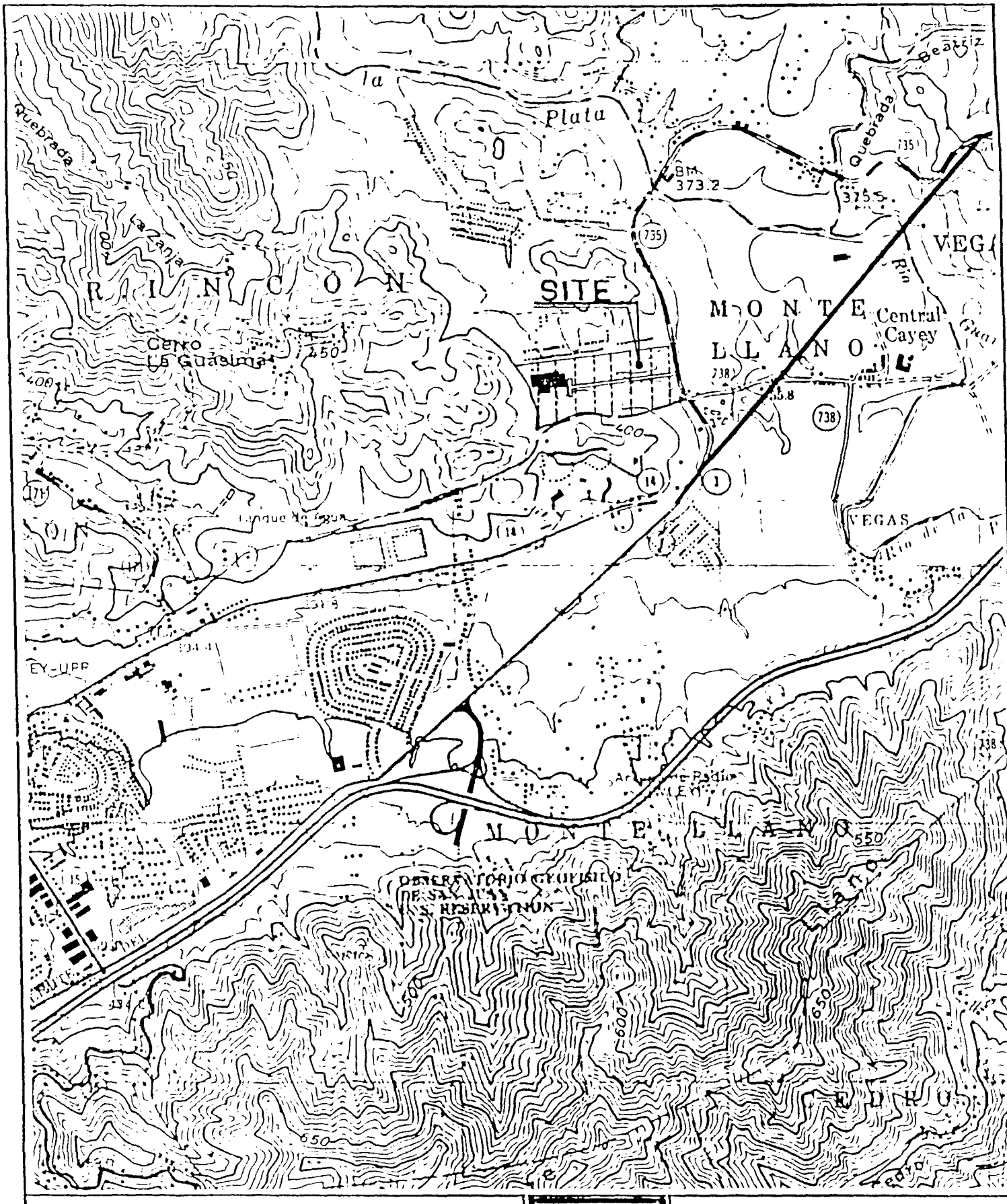
[1] L.H. Caribe Inc. appears in some documents as L.H. Research P.R., Inc. and it is a subsidiary of L.H. Research, Inc., 14402 Franklin Ave., Tustin, California 92680, Tel: (714) 730-0162.

FIGURE 1

LOCATION PLAN



LOCATION PLAN

PEDRO PANZARDI & ASSOCIATES

2.2 Objectives

The objective of this Environmental Site Assessment is to investigate the possibility that the site may be contaminated by hazardous substances, and advise of potential problems.

2.3 Regulatory Aspects

Regulations implementing the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) set forth a list of contaminants which, when found, must be removed from the site. The past and current owners of the site, along with those who generated the contaminants, or transported them or deposited them on the site, are liable for the cost of the cleanup. The nature of the Act is such that a disproportionate share of the cost may have to be borne by the current owner since it may be difficult to determine who the other parties are or because the other parties are corporate entities which no longer exist.

Current owners of contaminated sites have a few defense. One is to quality as an "innocent purchaser". To do so, they must demonstrate that the contamination occurred before they became owner and that they "did not know and had no reason to know" that the site was contaminated at the time they took title to it. An adequate investigation of the site is needed before it is purchased, but even with this, it may be difficult to qualify as an "innocent purchaser".

SECTION-3 BACKGROUND

3.1 Historical Review

The land was used before 1972 for agriculture. Figure 2 is an aerial photo of the site taken on February 7, 1951. The geology of the area, as described in the Comerio-quadrangle of the geological map prepared by the U.S. Geological Survey in 1960, is a terrace deposit (Qt). These deposits are composed primarily of unconsolidated sand, gravel and silt including large cobble and boulders of volcanic rock. According to the existent geology, this site should have a good drainage and porosity. There is no evidence of existing sink holes and any history of floods. The elevation is 385-390 mts above the sea level. About 0.5 miles north is La Plata River.

In 1973 Puerto Rico Industrial Development Co. (PRIDCO) developed an Industrial Park. At that time one pharmaceutical plant (Vicks) occupied the largest lot in the highest part of the development. At present the Olay (Vicks) company occupies the lot. The subject lot of this investigation is identified as No.3 T-1254-0-79. Other industries established in the vicinity are Westinghouse, Nypro, Micon, Becton Dickinson Diagnostic, and a residential development. Downhill is a wastewater treatment plant owned by PRIDCO constructed in 1980 to serve the industrial park area.

FIGURE 2

AERIAL PHOTO

AERIAL PHOTOGRAPH

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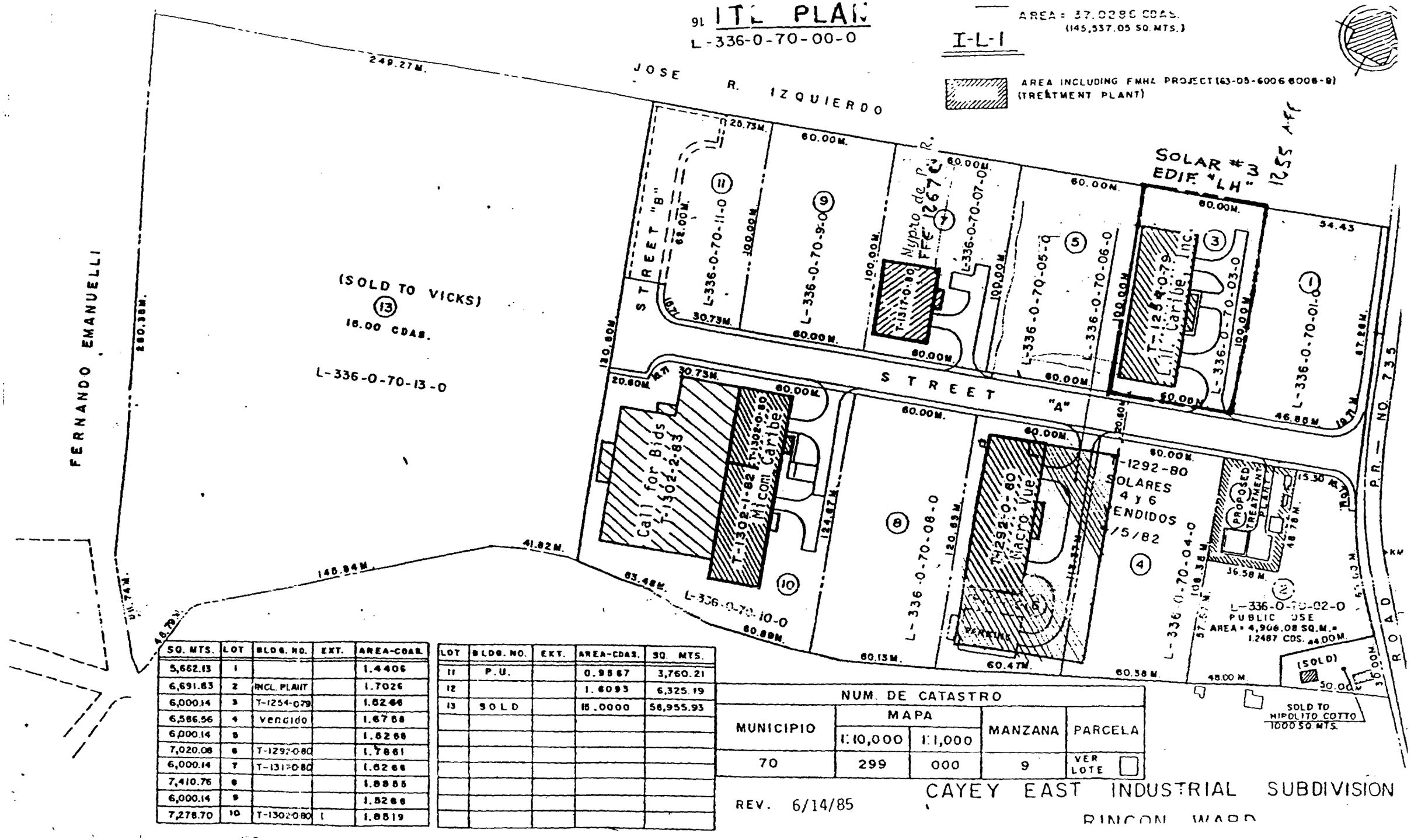
1250 Ponce De Leon Ave.
Santurce, Puerto Rico
Tels. (809) 722-3864 ,3867

The building was constructed in 1979. The construction was finished on July 10, 1980. It was designed for TORO IRRIGATION, Inc., but they never used the property. It was then assigned to L.H. Research P.R., Inc. (L.H. Caribe, Inc.) on October 6, 1980. L.H. Caribe used the property for nine years (December 1989) and is empty up to this moment (see Figure No.3).

FIGURE 3

FACILITIES NO. 3 T-1254-0-79



SQ. MTS.	LOT	BLDG. NO.	EXT.	AREA-CDAS.
5,662.13	1			1.4406
6,691.83	2	INCL. PLAIT		1.7026
6,000.14	3	T-1254-079		1.5266
6,586.56	4	Vendido		1.6758
6,000.14	5			1.5266
7,020.08	6	T-1292-080		1.7861
6,000.14	7	T-1317-080		1.5266
7,410.76	8			1.8855
6,000.14	9			1.5266
7,278.70	10	T-1302-080	I	1.8519

LOT	BLDG. NO.	EXT.	AREA-CDAS.	SQ. MTS.
11	P.U.		0.9867	3,760.21
12			1.6093	6,325.19
13	SOLD		15.0000	58,955.93

NUM. DE CATASTRO				
MUNICIPIO	MAPA		MANZANA	PARCELA
	1:10,000	1:1,000		
70	299	000	9	VER LOTE ☐

REV. 6/14/85

CAYEY EAST INDUSTRIAL SUBDIVISION

RINCON WARD

3.2 L.H. Caribe Manufacturing Process

L.H. Caribe manufactured power supplies. The operation started with the receiving of parts from the U.S.A. They inspected the parts and sent the unassembled P.C. Board with components (kits) to Haiti until 1987 and later to Dominican Republic. Coils, transformer and the assembly of P.C. Board were performed in the Dominican Republic.

The operation in Puerto Rico began with a visual inspection and electronic test of the assembled parts. Those that did not meet the specifications were reworked changing components, etc. In that area they used solvents to clean the board. Also they performed some welding. Solvents used were isopropyl alcohol (IPA), FREON and FLUX (trichloroethane). Freon was recovered in the Branson Machine (outside the building), see Figure No. 4, and the rest of the solvents were disposed through Safety Kleen.

The next step was the painting of metal parts and printing. After that they were placed in a six by four (6' x 4') furnace for drying. Once they had all the parts they started to assembly the power supplies which were the final product. Power supplies were tested and if there was any problem they were sent to the two re-work benches for repair.

FIGURE 4

BRANSON MACHINE

BRANSON MACHINE

THIS MACHINE WAS USED TO RECOVER SOLVENTS (FREON).
IT IS LOCATED AT THE OUTSIDE OF THE BUILDING.

After power supplies passed the test, they were placed in a chamber at 105°C with full load for eight (8) hours. That is the final test. Once they passed this test they were packed and shipped to the U.S.A.

The operation generated about fifty five (55) gallons of spent solvent every three (3) months.

3.3 Areas of Concern

There is an underground diesel tank in the facilities. The tank was used to storage diesel for their emergency generator. The tank is not listed in the Environmental Quality Board (EQB) and does not have corrosion protection. The product in the tank was sampled and quantity was estimated in 5,658 gals. There are two phases, the lower is basically water and was estimated in 1,655 gals, the upper phases (hydrocarbons) were estimated in 4,003 gals.

Also, there are one septic tank and three injection wells in the facilities which are not in use. They were constructed around 1980. Shortly after construction, a treatment plant was built by PRIDCO to serve the industrial park, and the septic tank injection well system was abandoned. However, it has not been closed following the EQB closure procedures.

Around 1983 a small diesel spill occurred in the facilities. While filling a vehicle with diesel the system was left unattended and an approximate 50 gals spill occurred. The combustible ran through the parking lot. No agency was notified.

On June 14, 1988 a diesel spill occurred in the area. A quantity of approximatly 1,300 gallons of diesel reached the small creek downhill and later the La Plata River. On June 15, 1988 the Puerto Rico Sewer and Aqueduct Authority suspended the water to the community because they took water down stream on the La Plata River. The spill occurred in MACRO VUE under permit UIC 87-00007 and later changed to UST 86-1958.

During our interviews somebody told us about a big diesel spill that occurred in the Vicks facilities. We were not able to find official information in the Environmental Quality Board under Vicks or Olay Company.

SECTION-4 FIELD INSPECTION AND SAMPLING

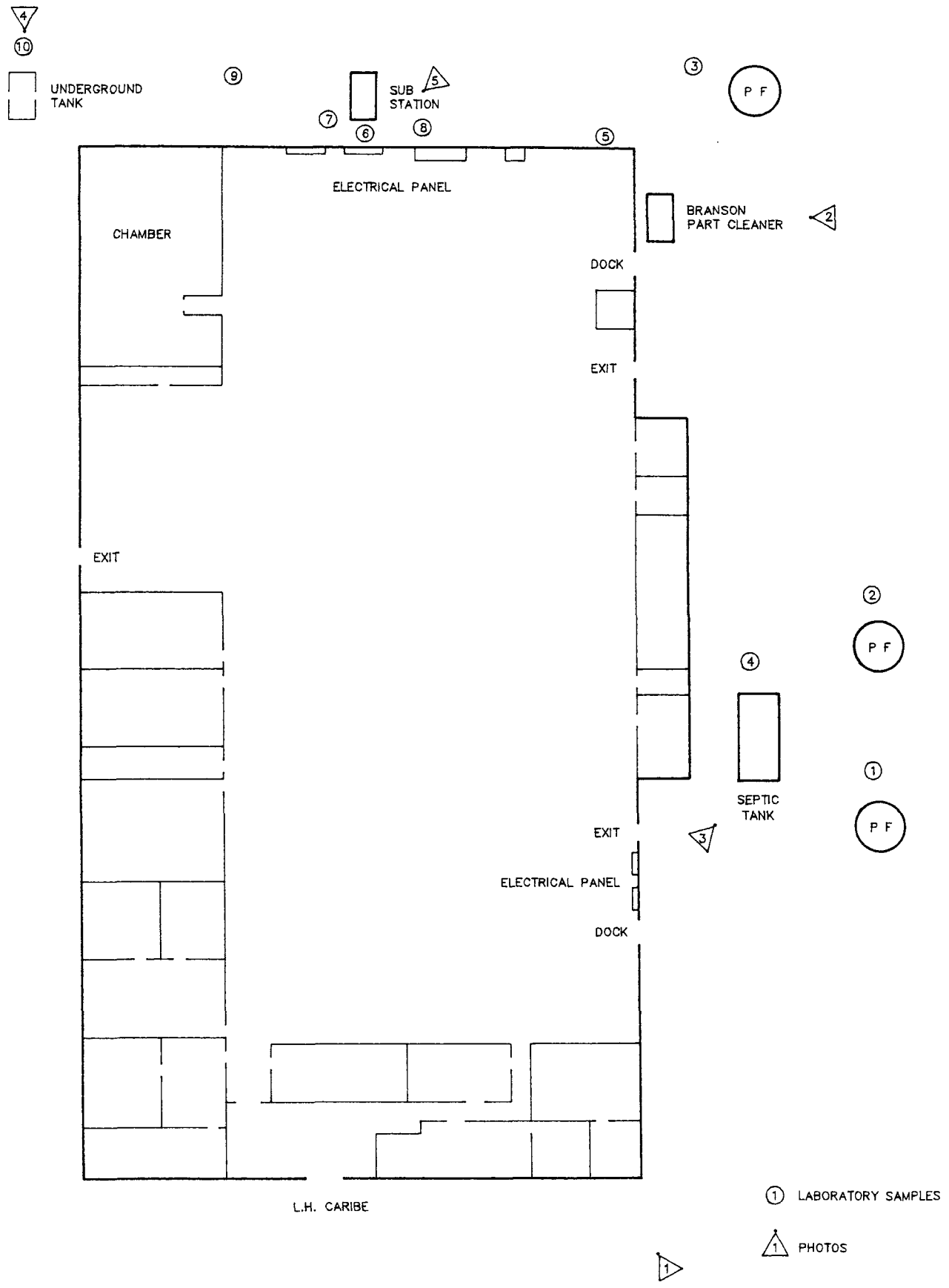
Field inspections were conducted on January 28, 1991 by Eng. Pedro Panzardi; February 12, 1991 by Eng. Ceferino Aponte, and February 20, 1991 by Eng. Nelson Reyes. Samples were taken on February 26, 1991, and March 5, 1991 by Quantum Laboratories personnel. Quantum was sub-contracted for sampling and analysis of the samples.

The laboratory experienced some problems with some samples and they had to be analyzed in another laboratory (in U.S.A.). This was the reason for the delay of the official report.

Figure No. 5 is a site-plan showing the approximate location of structures and the sampling points. It was prepared based on sketches submitted by Becton Dickinson Diagnostics and on field observations. It is not to scale, in that respect, may be used only as reference.

FIGURE 5

SITE - PLAN



SITE PLAN

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1250 Ponce De Leon Ave.
Santurce, Puerto Rico
Tels. <809> 722-3664 ,3667

4.1 EQB-Hazardous Waste Inspection

L.H. Caribe was working as a small hazardous waste generator under EPA permit number PRD 104097852. On October 4, 1989 the Environmental Quality Board inspected the L.H. Caribe facilities in Cayey. Ms. Maribel Medina (Environmental Specialist) pointed out in her report eleven (11) violations to the present regulations. The company never answered to the E.Q.B. and therefore, the case remains pending. Fomento contacted Mr. Robert A. Nishimoto (Executive Vice-President of L.H. Research, Inc.) and he forwarded some documents in relation to that issue. We contacted the hazardous waste division of the EQB and after they reviewed the documents they decided to close the case. Copy of the letter from the EQB is attached.

4.2 Septic Tank and Injection Wells

There is a septic tank with three (3) injection wells (copy of the drawings is attached) in the facilities. All of them were sampled on February 24, 1991. Figure No. 6 shows the area of the septic tank and the injection wells. Water samples were taken from all wells and septic tank. Also, we took the bottom sludge of the septic tank. The quantity of sludge was very small maybe because it was in use for a couple of months only. All samples were analyzed for solvents, COD, and TOC.

The laboratory reported the following results

Parameter	**41418**	**41419**	**41420**	**41421**	**41422**
Dicholoromethane	ND	ND	ND	ND	ND
Isopropylalcohol	ND	ND	ND	ND	ND
1,4 Dioxane	ND	ND	ND	ND	ND
1,2 Butyleneoxide	ND	ND	ND	ND	ND
MethylethylKetone	ND	ND	ND	ND	ND
1,1,1 Trichloroethane	ND	ND	ND	ND	ND
COD	237	238	230	202	228

ND means not detected.

Sample Identification

41,418 Sample #1: Injection Well #1
41,419 Sample #2: Injection Well #2
41,420 Sample #3: Injection Well #3
41,421 Sample #4: Water from Septic Tank
41,422 Sample #6: Sludge from Septic Tank

These results are negative to contamination and the COD is within acceptable limits. In the blueprints we can notice the sanitary connection to the treatment plant.

FIGURE 6

SEPTIC TANK AND INJECTION WELLS

Parameter	**Units**	**Result**	**Limit**
Water Content	%Vol	98.0	0.05
Iron	PPM	159	
Lead	PPM	0	
Copper	PPM	1	
Chromium	PPM	0	
Aluminum	PPM	3	
Nickel	PPM	0	
Silicon	PPM	26	
Zinc	PPM	150	
Vanadium	PPM	3	
Bacteria Content	Counts	1,000/ml	
Yeast Contamination	Counts	100/ml	

For the upper phase:

Parameter	**Units**	**Result**	**Limit**
API Gravity (60 F)		33.2	
ASH Content	% wt	0.002	0.010 Max
Cetane Index	Calculated	47.1	400 Min.
Particulate	Mg/100 ml	1.6	
Viscosity (40 C)	Centistoke	3.2	1.9 - 4.1
Distillation (90%)	Deg. F	634	540 - 640

The results are within the limits and, as stated before, is very clean.

In this case we are assuming the capacity of the tank because we can not find a drawing of it. For that reason we want to verify the quantity we took out to recalculate the size of the tank. It was not possible to do that because PRIDCO decided to take care of the product inside and the person that took the product was not able to take a reliable measure of it.

4.5 Electric Transformer

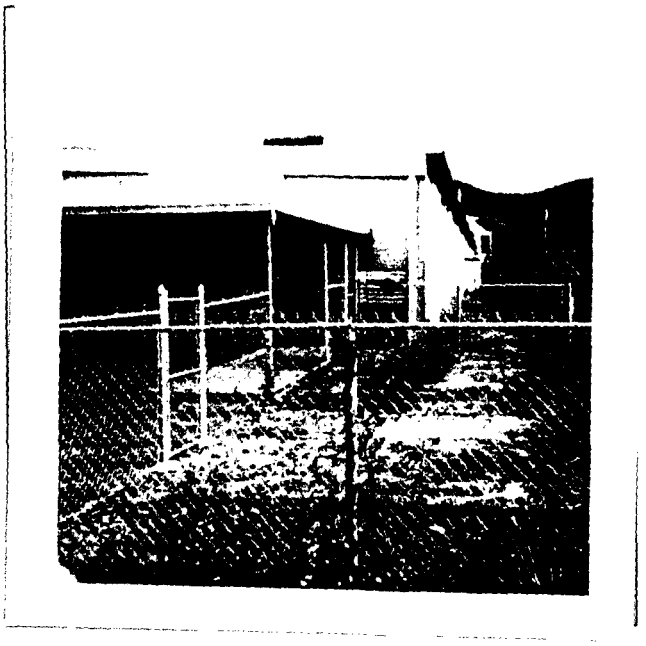
Figure No. 8 shows the sub-station of the facilities. There is a transformer. In the transformer is a placard which states that originally the transformer was filled with PCB free oil. To ensure that nobody added contaminated oil to the transformer we took a sample of it. The laboratory results were negative. During the sampling we noticed that the transformer needed oil. It is very important to refill it with PCB free oil. A complete test of the sub-station is recommended before it is put in service.

4.6 Asbestos

Figure No. 8 shows in the top of the building a "fascia". A sample of this "fascia" was taken to check if it contain asbestos. The result from the laboratory was positive as it shows 5-15% of chrysotile asbestos.

The Environmental Quality Board established, on July 9, 1989 the norms to be followed for disassembly and disposal of structures containing asbestos. They explain in these norms that the problem is mostly emotional since the panels were made with the least dangerous type of asbestos. The main concern was for school rooms where wear and tear by students could liberate fibers. The norms recognize that properly maintained structures should not represent problems.

FIGURE 8



UNDERGROUND TANK

THIS IS UNDERGRUOND DIESEL TANK. IT IS LOCATED IN THE BACKYARD.
THE AREA IS COVERED WITH CEMENT AND HAS A FENCE AROUND IT.
IT WAS USED FOR THE EMERGENCY GENERATOR.

SEPTIC TANK AND INJECTION WELLS

THIS IS THE SEPTIC TANK CONSTRACTED IN 1980. THE INJECTION WELLS ARE AT THE OTHER SIDE OF THE PARKING AREA.

THESE ARE THE FACILITIES ONCE USED BY L.H CARIBE, INC. CAYEY P.R.. THE FACILITIES BELONG TO PRIDCO AND ARE VACANT AT THE PRESENT MOMENT. THE PROPERTY HOLDS NO. 3 T-1294-079.

SECTION 5-CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

During the past five weeks we have been interviewing personnel that formerly worked in L.H. Caribe (all of them belong to management), visiting some government agencies and performing chemical testing of the site. Due to the reason that the client was negotiating with PRIDCO, we have been informing Mr. Alejandro Blanco of all the findings in the case. Later, we submitted a letter with some areas of concern to be used in his negotiation with PRIDCO. Beside the areas of concern we indicated in that letter (copy attached) that we could not find any other potential problem in the Environmental field.

5.2 Recommendations

In those areas of concern we will suggest the following in order to be used for negotiating with PRIDCO.

5.2.1 About the small generator number from EPA, we understand that presently there is no problem with any of the government agencies. The number is related to other company (L.H. Caribe) and we suggest to write a letter to EPA and delete the number.

This is supposed to be done by L.H. Research company but if they do not proceed to do it, PRIDCO should.

5.2.2 Even when the samples of the injection wells and septic tank are negative to hazardous material, we recommend that these be closed to eliminate the potential of future misuse.

5.2.3 The underground diesel tank is not registered in the Environmental Quality Board. Also, there is an incident with the product that occurred on April 2, 1991. There is no drawing of the tank and, also, we do not know the exact capacity. These are too many unknown parameters so we strongly recommend to remove the tank completely from the ground in conformity with all regulatory requirements.

5.2.4 In respect to the asbestos in the top of the building (back area), the environmental law is changing and even though it does not represent a high problem at the moment, it should be encapsulated in place or removed. We recommend to remove it because in that way you eliminate the concern once and for all.

APPENDIX

SECTION

APPENDIX A

LETTER FROM EQB HAZARDOUS WASTE DIVISION

ESTADO LIBRE ASOCIADO DE PUERTO RICO / OFICINA DEL GOBERNADOR

Junta de Calidad Ambiental

1ro. de abril de 1991

Sr. Nelson Reyes
P.O. Box 2291
Hato Rey, Puerto Rico 00919-2291

Estimado señor Reyes:

Recientemente se revisó el expediente de la Compañía LH Caribe, PRD104097852, ubicada en el Parque Industrial Vicks en Cayey. El propósito de la revisión fue determinar el cumplimiento de la compañía con los requisitos aplicables a los pequeños generadores, según establecido en el Reglamento para el Control de los Desperdicios Sólidos Peligrosos y No Peligrosos.

Se desprende de la evaluación de los documentos que la referida compañía, sometió la evidencia requerida a tono con las deficiencias señaladas en comunicado fechado el 9 de octubre de 1989. Al momento del cierre, los desperdicios fueron removidos por la Compañía Safety Kleen con los números de manifiestos 89005 del 19 de diciembre de 1989 y 89004 del 11 de octubre de 1989.

Esperamos la información aquí ofrecida sea de utilidad en las gestiones que esté realizando en torno a este asunto.

Cordialmente,

Flor L. Del Valle López
Directora
Area Control Contaminación
de Terrenos

FDV/MDV/chd

APPENDIX B

PLUMBING SITE PLAN OF THE PROJECT NO. 3 T-1254-0-79

ELECTRIC TRANSFORMER

THE ELECTRIC TRANSFORMER WAS CHECKED FOR PCB CONTAIN.
THE PLACARD STATED THAT THE OIL IS PCB FREE.

APPENDIX C

LABORATORY REPORTS ON SOIL, AND WATER SAMPLES

QUANTUM LABORATORIES, INC.

ANALYTICAL SERVICES
G.P.O. BOX 361629 • SAN JUAN, PUERTO RICO 00936-1629
(809) 793-7288

April 4, 1991

PEDRO PANZARDI & ASSOCIATES
Attn: Eng. Nelson Reyes
PO BOX 2291
Hato Rey PR 00919-2291

A N A L Y S I S R E P O R T

SAMPLE DESCRIPTION:	Water, Soil and Bulk samples from former L.H. Caribe site at Vicks Dr., Industrial Park in Cayey, PR across from Beckton-Dickinson.
SAMPLE IDENTIFICATION:	41,418 Sample #1: Injection Well #1 41,419 Sample #2: Injection Well #2 41,420 Sample #3: Injection Well #3 41,421 Sample #4: Water from Septic Tank 41,422 Sample #6: Sludge from Septic Tank 41,423 Sample #9: Soil, northwest side, next to storage 41,424 Sample #11: Soil, south side of "Branson" 41,425 Sample #12, Soil, north side of "Branson" 41,426 Sample #7, Transformer oil 41,427 Sample #8, Soil next to transformer 41,428 Sample #10, Soil, near diesel storage tank 41,429 Sample #5, Fascia, north side of building
DATE SAMPLE SUBMITTED:	February 26, 1991
SAMPLED BY:	F. Guzmán, J.R. Ramírez, Quantum Labs
ANALYSIS REQUESTED:	Solvents, PCB's, Hydrocarbons

SOIL SAMPLES

PARAMETER	41423	41424	41425
Dichloromethane	ND	ND	ND
Isopropylalcohol (IPA)	ND	ND	ND
1,4-Dioxane	ND	ND	ND
1,2-Butyleneoxide	ND	ND	ND
Methylethylketone (MEK)	ND	ND	ND
1,1,1-Trichlorethane	ND	ND	ND
Chemical Oxygen Demand	24,348	49,716	12,571

METHOD AND NOTES

ND means "Not Detected"

Dichloromethane, Trichloroethane, and MEK were analyzed by modified purge and trap (EPA SW-846 Modified 5020) followed by gas chromatography using a Carbopack B/3% SP-1500 column (12ft) (EPA SW-846 Method 8010/8015) programmed between 70° and 225°C.

Detection limits were as follows:

Dichlorometane	0.50ppm
Methylethylketone	1.00ppm
1,1,1-Trichloroethane	5.0ppm

Dioxane, Isopropylalcohol and Butylene oxide (Butylene glycol) were analyzed by extracting weighed aliquots in a volume of water, filtering and using direct injection of the aqueous solution into the gas chromatograph under the same conditions as above (EPA SW-846 Method 8010/8015). Detection limits were as follows:

Dioxane	15ppm
Isopropylalcohol	10ppm
Butylene oxide	10ppm

QUALITY CONTROL AND ASSURANCE

Reproducibility, linearity, detection limit and quantification were determined by means of standards (neat samples of solvents), instrument and trip blanks, and duplicates as described in SW-846 Methods 8010/8015.

ANALYSIS FOR PCB'S

PARAMETER	41426	41427
Polychlorinatedbiphenyls	LT 50	LT 50

WATER SAMPLES

PARAMETER	41418	41419	41420	41421	41422
Dichloromethane	ND	ND	ND	ND	ND
Isopropylalcohol (IPA)	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND
1,2-Butyleneoxide	ND	ND	ND	ND	ND
Methylethylketone (MEK)	ND	ND	ND	ND	ND
1,1,1,-Trichloroethane	ND	ND	ND	ND	ND
Chemical Oxygen Demand	237	238	230	202	228

METHODS AND NOTES

ND means "Not Detected"

Dichloromethane, Trichloroethane and MEK were analyzed by purge and trap (EPA SW-846 Method 5030) followed by gas chromatography using a Carbopack B/3% SP-1500 column (12ft) (EPA SW-846 Method 8010/8015) programmed between 70° and 225°C.

Detection limits were as follows:

Dichloromethane	0.50ppm
Methylethylketone	1.00ppm
1,1,1-Trichloroethane	5.0ppm

Dioxane, Isopropylalcohol and Butylene glycol were analyzed by direct injection of water samples into the gas chromatograph using the same column and conditions as above (EPA SW-846 Method 8010/8015). Detection limits were:

Dioxine	15ppm
Isopropylalcohol	10ppm
Butylene oxide	10ppm

For the determination of Butyleneoxide, the standard used was butyleneglicol which is the hydrolysis product. Quality control data similar as above was used to determine parameters.

Chemical Oxygen Demand reported in mg/L.

QUALITY CONTROL AND ASSURANCE

Instrument blanks, trip blanks, duplicates and standards were analyzed to test for reproducibility, linearity, limit of detection, cross contamination and to quantify results. Standards used were neat samples of each solvent tested. Method used was as described in SW-846 Methods 8010/8015.

METHODS AND NOTES

LT means "Less Than"
Results are given in ppm
PCB was screened by converting organic chlorine to inorganic chloride via sodium fusion and determination of chloride by the mercuric nitrate titration method.

ANALYSIS OF SOIL FOR FUEL

PARAMETER	41428
BTEX	ND
T. Hydrocarbons	ND

METHOD AND NOTES

ND means "Not Detected"

BTEX (Benzene, Toluene, Ethylbenzene and Xylene) were determined by purge and trap (EPA SW-846 Method 5020) followed by gas chromatography with PID (EPA SW-846 Method 8020). Detection limit is 1ppm.

Hydrocarbons were determined by Freon extraction followed by IR analysis (EPA modified method 418.1).

Bulk Sample (Fascia)

PARAMETER	41429
Description	Multilayer/multicolor
Chrysotile Asbestos	5-15%
Amosite Asbestos	ND
Crocidolite Asbestos	ND
Anthophylite Asbestos	ND
Tremolite/Actinolite	ND
Fibrous glass	ND
Cellulose fibers	trace
Non-fibrous material	90-99%

METHOD AND NOTES

ND means "Not Detected"

Analysis followed EPA 600/M4-84-020: oil dispersion with polarized light microscopy.

QUANTUM LABORATORIES, INC.

ANALYTICAL SERVICES
G.P.O. BOX 361629 • SAN JUAN, PUERTO RICO 00936-1629
(809) 793-7288

April 4, 1991

C E R T I F I C A T I O N
BECTON-DICKINSON CAYEY PROJECT

The analysis reported herein have been performed following approved methods found in "Standard Methods for the Examination of Water and Wastewater " (APHA) and/or in "Methods for Chemical Analysis of Water and Wastes" (EPA).

Instruments, solutions and reagents have been prepared, standarized and/or calibrated according to the applicable methods.

All tests have been performed by or under the supervision of licensed chemist.

J. Roberto Ramírez, PHD
Lic. 796

J. Roberto Ramírez, Ph. D.

ESTADO LIBRE ASOCIADO DE PUERTO RICO
QUIMICO LICENCIADO
179975

QUANTUM LABORATORIES, INC.

ANALYTICAL SERVICES
G.P.O. BOX 361629 • SAN JUAN, PUERTO RICO 00936-1629
(809) 793-7288

April 9, 1991

PEDRO PANZARDI & ASSOCIATES
Attn: Eng. Nelson Reyes
PO BOX 2291
Hato Rey PR 00919-2291

A N A L Y S I S R E P O R T

SAMPLE DESCRIPTION: Bulk Liquid in Diesel Holding Tank located at the former L.H. Caribe site at Vicks Dr. (Industrial Park) in Cayey

SAMPLE IDENTIFICATION: 41,491 Bottom of tank
41,492 Middle of tank

DATE SAMPLE SUBMITTED: March 5, 1991

SAMPLED BY: F. Guzmán & J.R. Ramírez, Quantum Labs.

ANALYSIS REQUESTED: Characterization

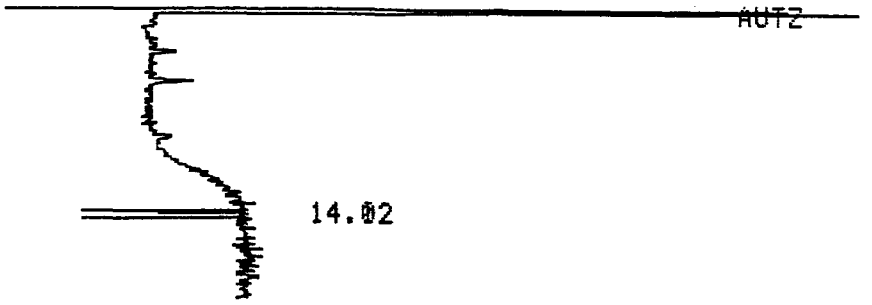
SAMPLE 41,491 BOTTOM SEDIMENT

PARAMETER	UNITS	METHOD	RESULT	LIMIT (1)
Water Content	% Vol	D96	98.0	0.05
Iron	ppm	ICP	159	____
Lead	ppm	ICP	0	____
Copper	ppm	ICP	1	____
Chromium	ppm	ICP	0	____
Aluminum	ppm	ICP	3	____
Nickel	ppm	ICP	0	____
Silicon	ppm	ICP	26	____
Zinc	ppm	ICP	150	____
Vanadium	ppm	ICP	3	____
Bacterial Content	counts	____	approx 1Mill/mL	____
Yeast Contamination	counts	____	approx 100/mL	____

SAMPLE 41,492 MIDDLE LAYER

PARAMETER	UNITS	METHOD	RESULT	LIMIT (1)
API Gravity (60°F)	____	D287	33.2	____
Ash Content	%wt	D482	0.002	0.010Max
Cetane Index	Calculated	D976	47.1	40.0 Min
Particulate	mg/100mL	D2276A	1.6	____

SAMP	ANALYSIS	TIME	DATE
53	PRESET	08:48:42	03:27:91



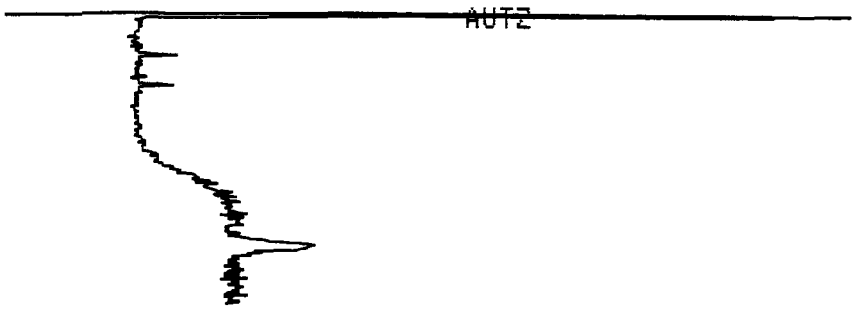
RUN TIME 20.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA		AREA%	NAME
14.02	867	P	40.6279287	
14.12	1267		59.3720712	
	2134		99.9999999	TOTAL

SAMP ANALYSIS TIME   DATE
  54 PRESET   09:12:13   03:27:91



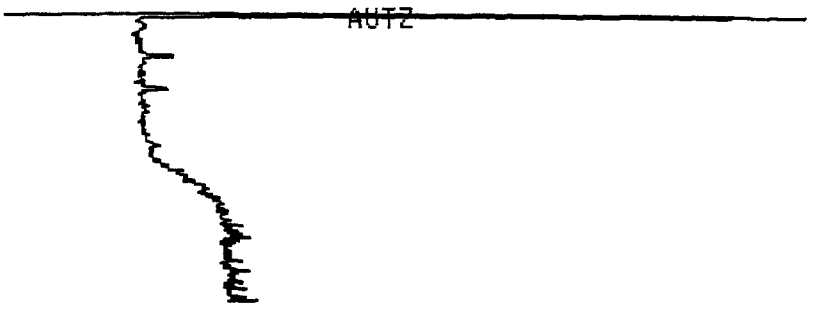
RUN TIME 20.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
62	PRESET	13:40:05	03:27:91



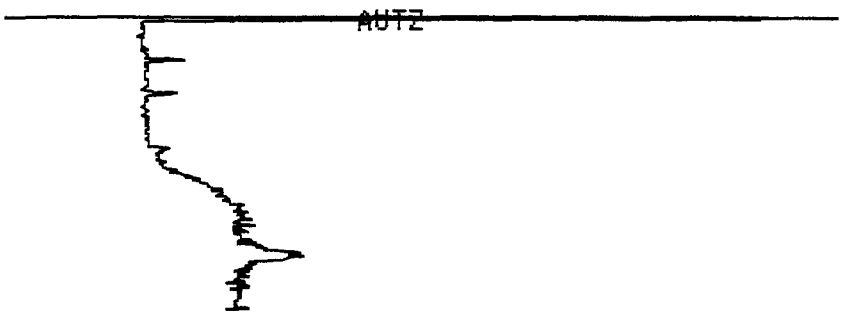
RUN TIME 20.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP ANALYSIS TIME DATE
69 PRESET 10:34:33 03:28:91



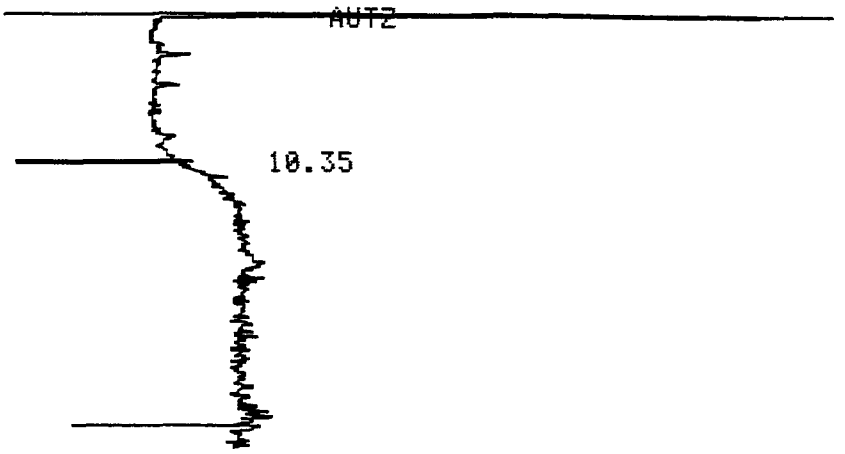
RUN TIME 20.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
71	PRESET	12:37:03	03:28:91



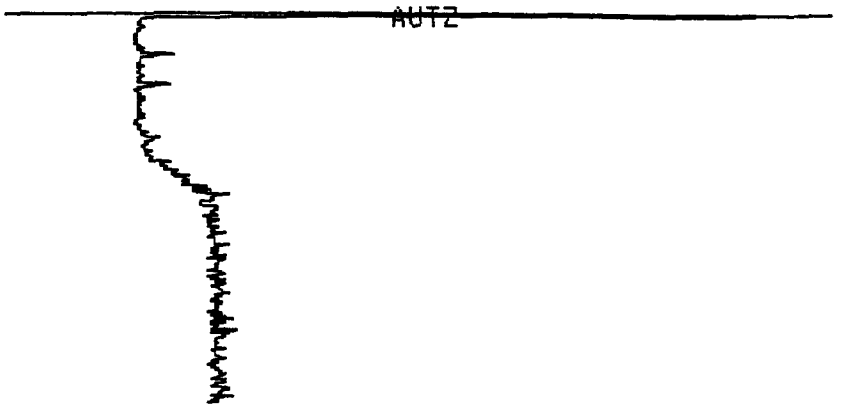
RUN TIME 30.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
10.35	343	100.000000	
	343	100.000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
74	PRESET	15:23:17	03:28:91



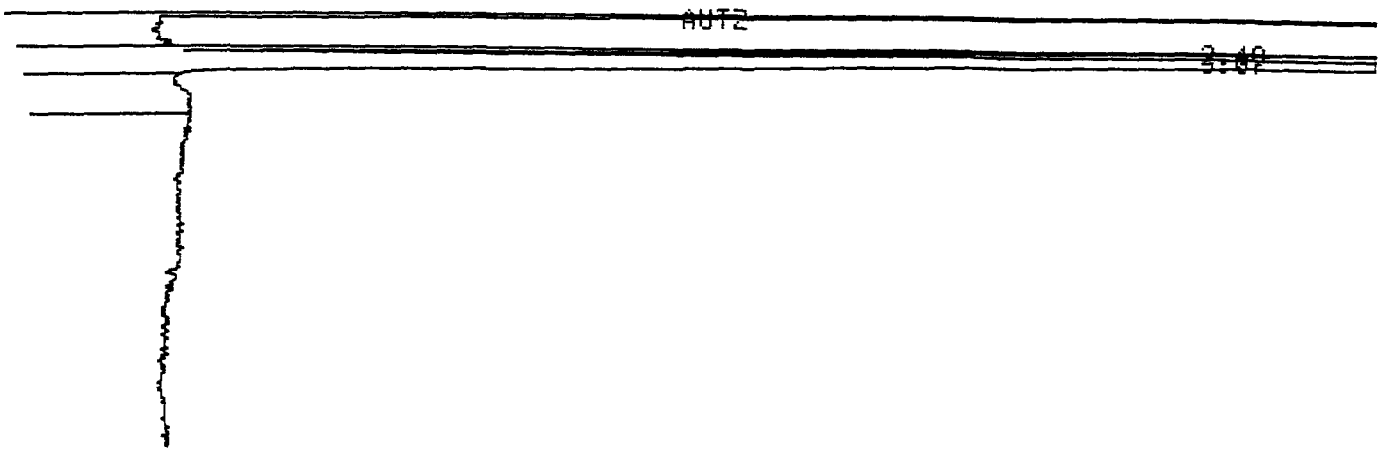
RUN TIME 26.8

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
12	PRESET2	12:27:13	03:08:91



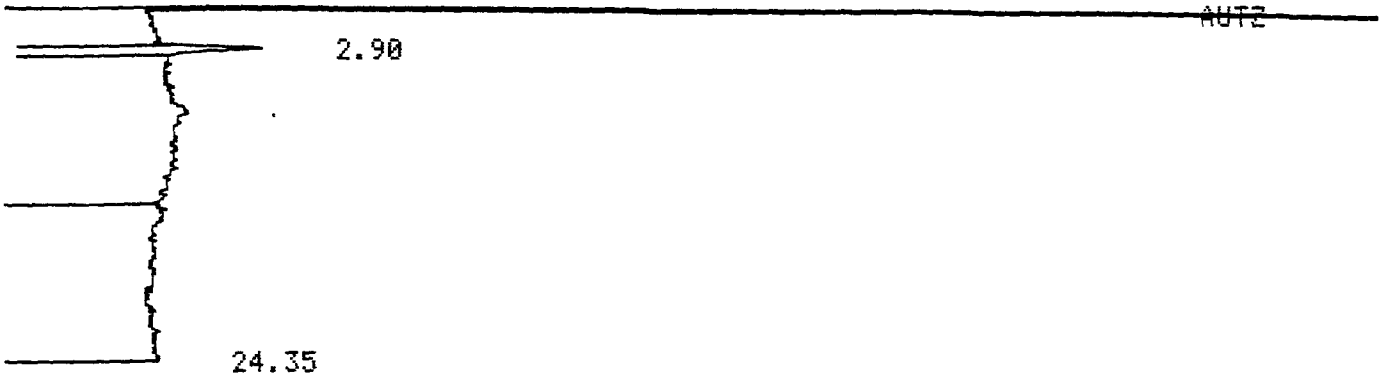
RUN TIME 30.0

ANALYSIS OF BTEX BY PID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
~~BLANK~~ 41428 wt(g) 1.4488
VOL.(ML) 5

INT2
NORMALIZATION METHOD

TIME	AREA		AREA%	NAME
2.48	24349	P	15.2009289	
3.07	135832		84.7990710	
	160181		99.9999999	TOTAL

SAMP ANALYSIS TIME DATE
19 PRESET2 18:25:38 03:08:91



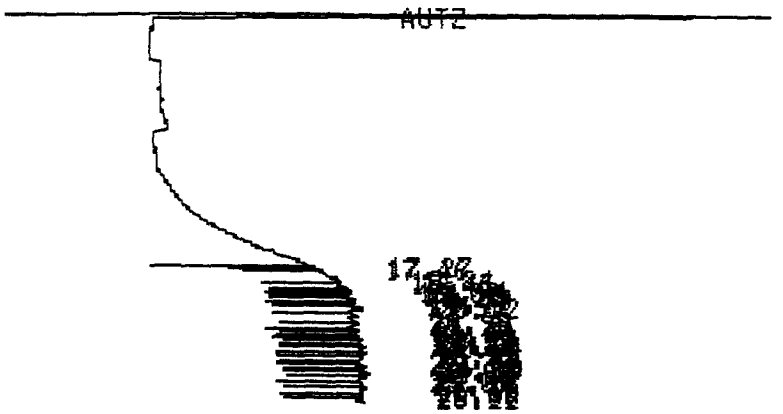
RUN TIME 24.4

ANALYSIS OF BTEX BY PID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41493 adj @ 1.3405
VOL.(ML) 5

INT2
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
2.90	1606	98.5880908	
24.35	23	1.4119091	
	1629	99.9999999	TOTAL

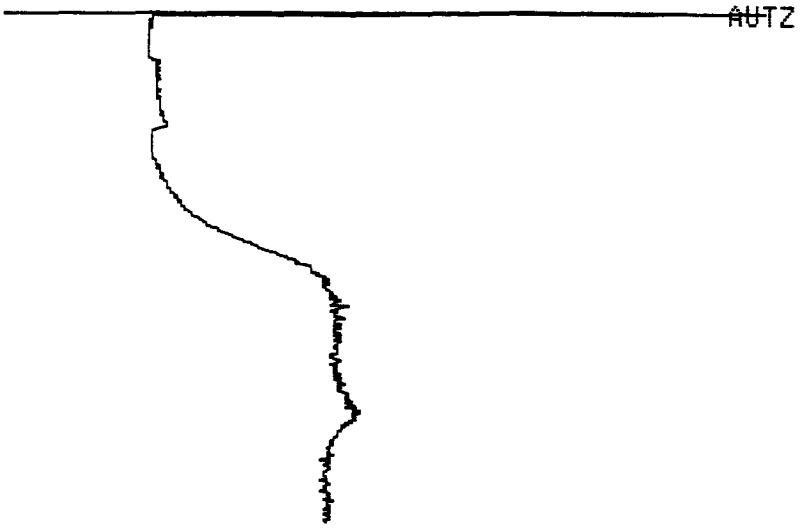
SAMP	ANALYSIS	TIME	DATE
9	PRESET	10:15:37	03:20:91



RUN TIME 26.6

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(UL) 5

SAMP	ANALYSIS	TIME	DATE
12	PRESET	11:56:24	03:20:91



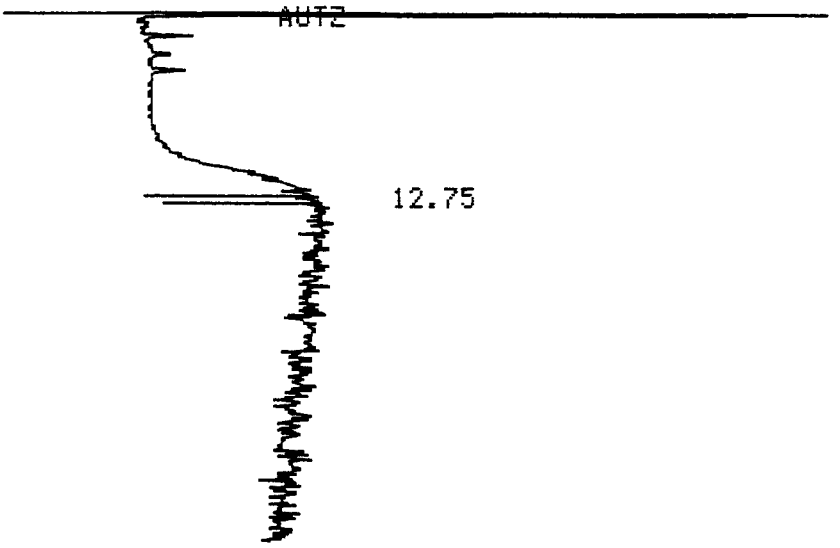
RUN TIME 35.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP ANALYSIS TIME DATE
50 PRESET 14:30:17 03:26:91



RUN TIME 36.4

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
12.75	2829	100.000000	
	2829	100.000000	TOTAL

SAMP ANALYSIS TIME DATE
14 PRESET 13:49:00 03:20:91

~~AUTZ~~

RUN TIME 15.3

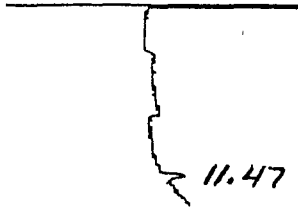
ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
~~PR41420~~ STANDARD-10PPM ISOPROPYL ALC.
VOL.(UL) AR 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP ANALYSIS TIME DATE
19 PRESET 02:47:08 03:20:91

AUTZ



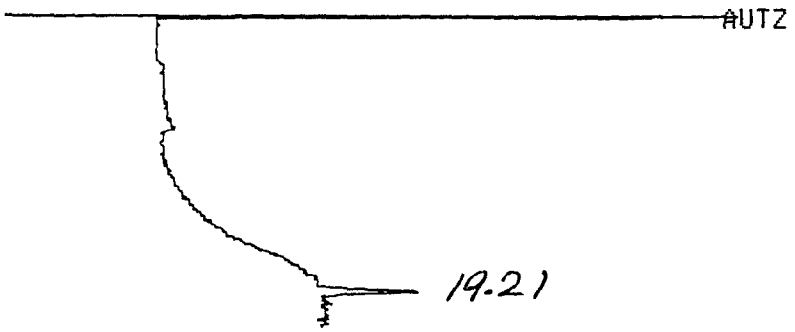
RUN TIME 13.8

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
STANDARD 10 PPM ISOPROPYL ALC.
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP ANALYSIS TIME DATE
20 PRESET 03:06:58 03:20:91



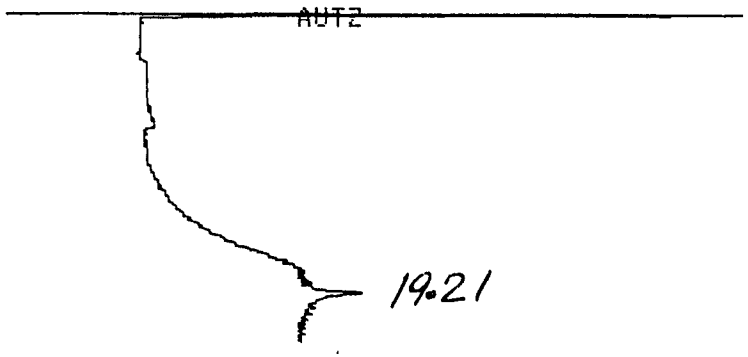
RUN TIME 21.7

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
STANDARD 50 PPM 1,4-DIOXANE
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
21	PRESET	03:37:18	03:20:91



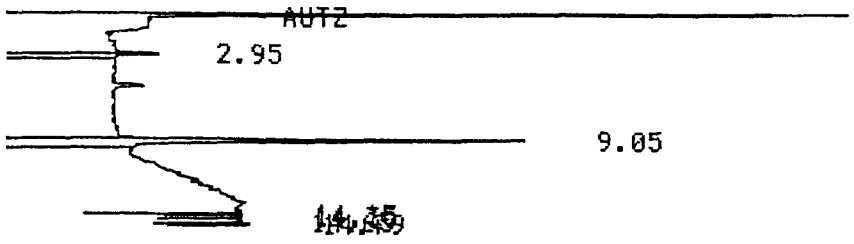
RUN TIME 22.8

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
STANDARD 25 PPM 1,4-DIOXANE
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP ANALYSIS TIME DATE
37 PRESET 15:26:36 03:25:91



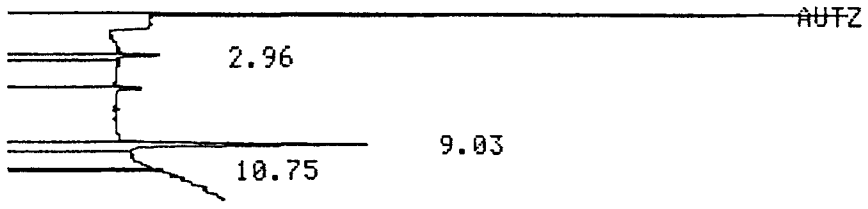
RUN TIME 15.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
STD. 1 PPM METHYLENE CHLORIDE
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA		AREA%	NAME
2.95	1444		6.3578724	
9.05	17510		77.0958083	
14.35	1108	SP	4.8784783	
14.65	1826	SP	8.0398027	
14.79	824	S	3.6280380	
	22712		99.9999997	TOTAL

SAMP ANALYSIS TIME DATE
39 PRESET 16:20:13 03:25:91



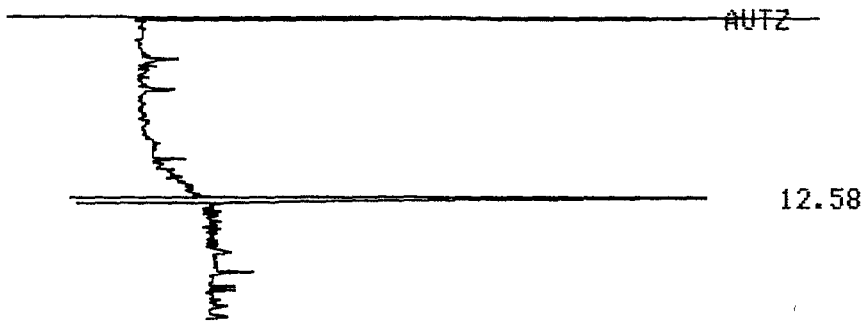
RUN TIME 13.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
STD. 0.5 PPM METHYLENE CHLORIDE
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
2.96	1724	14.4159210	
9.03	10064	84.1541934	
10.75	171	1.4298854	
	11959	99.9999998	TOTAL

SAMP	ANALYSIS	TIME	DATE
75	PRESET	15:53:10	03:28:91



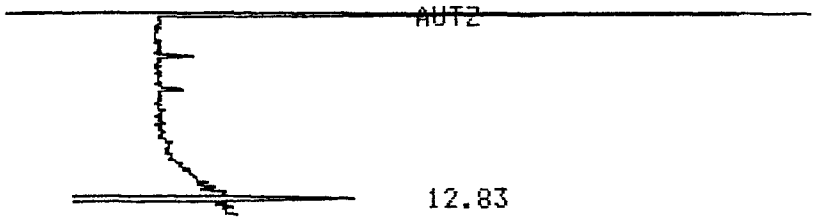
RUN TIME 20.8

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
STD.10 PPM METHYL ETHYL KETONE
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
12.58	21296	100.000000	
	21296	100.000000	TOTAL

SAMP ANALYSIS TIME DATE
76 PRESET 16:24:11 03:28:91



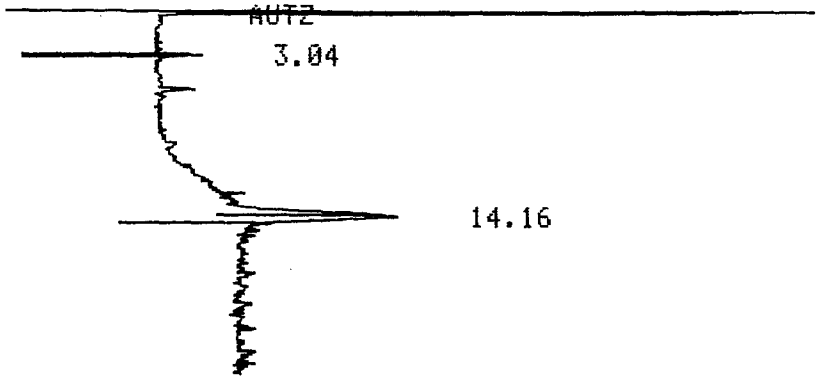
RUN TIME 14.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
STD. 1 PPM METHYL ETHYL KETONE
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
12.83	5124	100.000000	
	5124	100.000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
72	PRESET	14:11:39	03:28:91



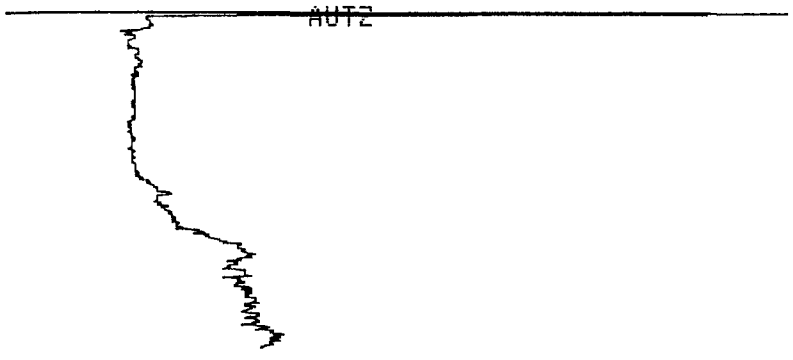
RUN TIME 24.9

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
STD 5 PPM 111-TRICHLOROETHANE
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
3.04	841	16.2167373	
14.16	4345	83.7832626	
	5186	99.9999999	TOTAL

SAMP	ANALYSIS	TIME	DATE
26	PRESET	09:31:43	03:21:91



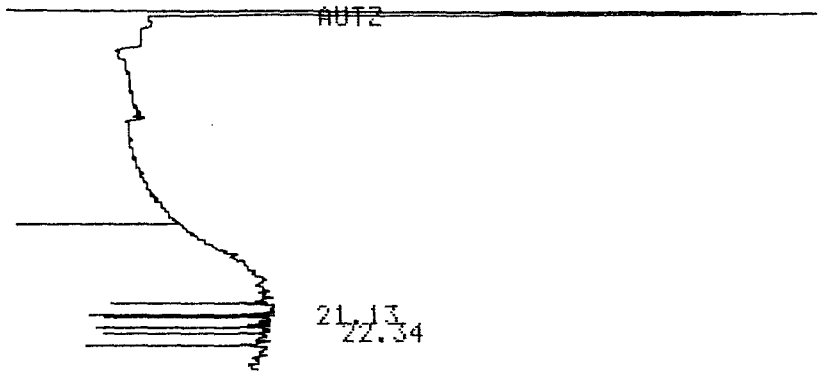
RUN TIME 23.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41419
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP ANALYSIS TIME DATE
24 PRESET 08:31:12 03:21:91



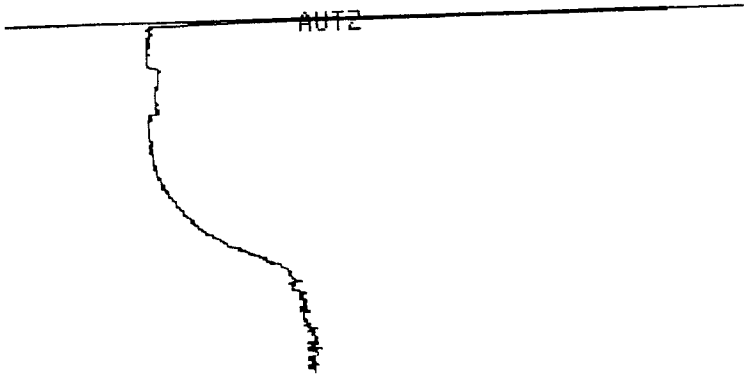
RUN TIME 25.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
21.13	536	30.7339449	
22.34	1208	69.2660550	
	1744	99.9999999	TOTAL

SAMP ANALYSIS TIME DATE
23 PRESET 04:34:21 03:20:91



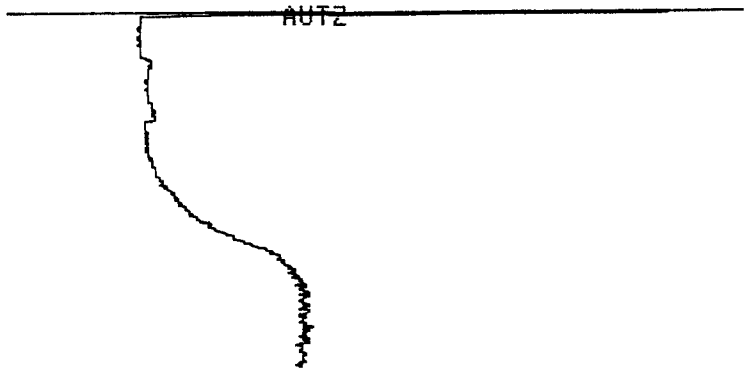
RUN TIME 24.8

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41418
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
22	PRESET	04:05:39	03:20:91



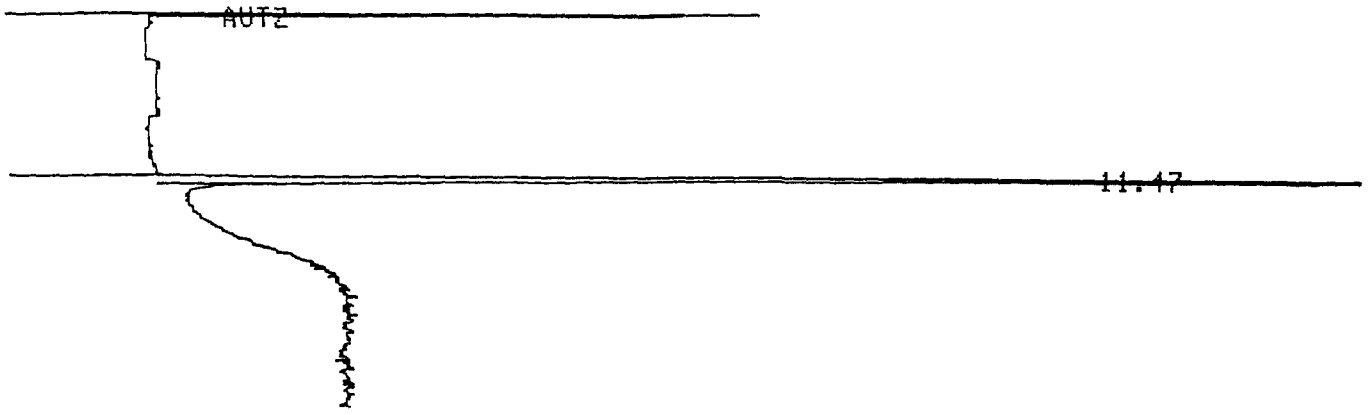
RUN TIME 25.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41420
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP ANALYSIS TIME DATE
10 PRESET 10:47:24 03:20:91



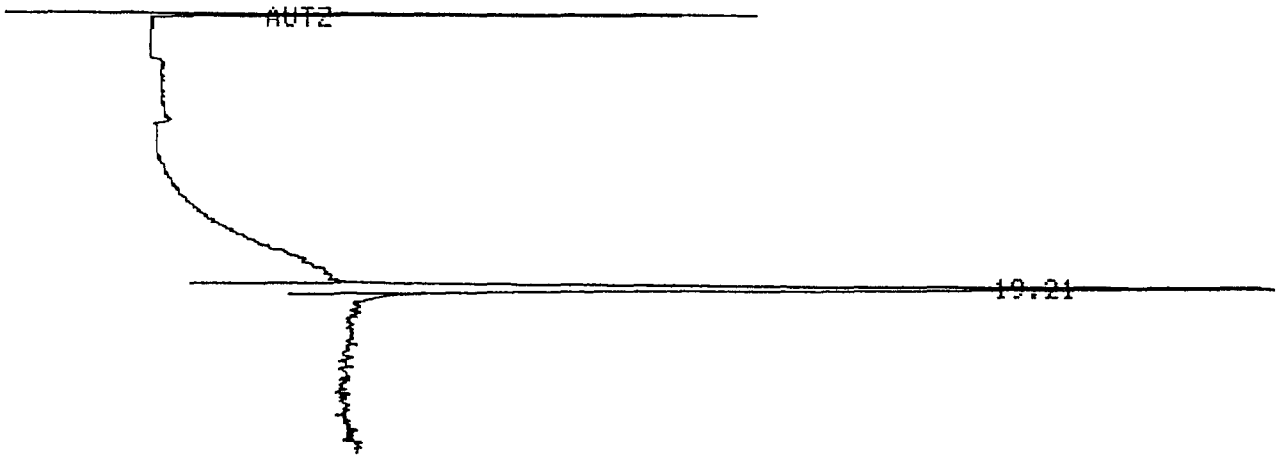
RUN TIME 27.3

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
STANDARD 500 PPM ISOPROPYL ALC.
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
11.47	76436	100.000000	
	76436	100.000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
11	PRESET	11:19:20	03:20:91



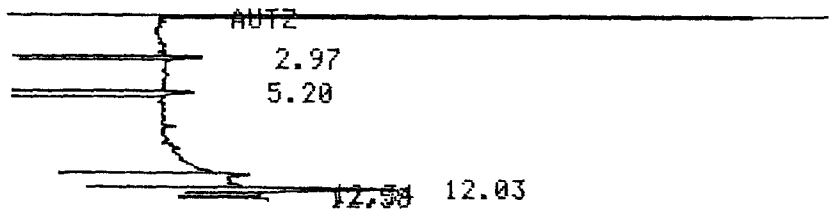
RUN TIME 30.5

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
STANDARD 500 PPM 1,4-DIOXANE
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
19.21	62546	100.000000	
	62546	100.000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
44	PRESET	10:00:51	03:26:91



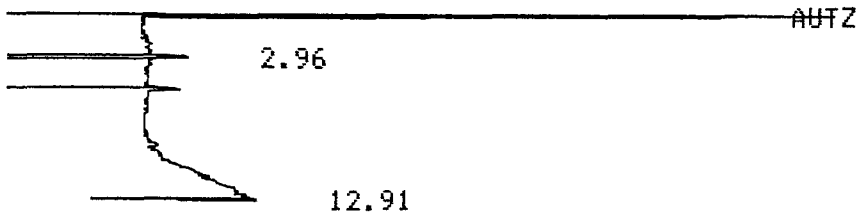
RUN TIME 13.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41421
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA		AREA%	NAME
2.97	839		9.2046077	
5.20	1186		13.0115194	
12.03	6254	P	68.6121777	
12.34	442	S	4.8491497	
12.58	394		4.3225452	
	9115		99.9999997	TOTAL

SAMP	ANALYSIS	TIME	DATE
43	PRESET	09:34:42	03:26:91



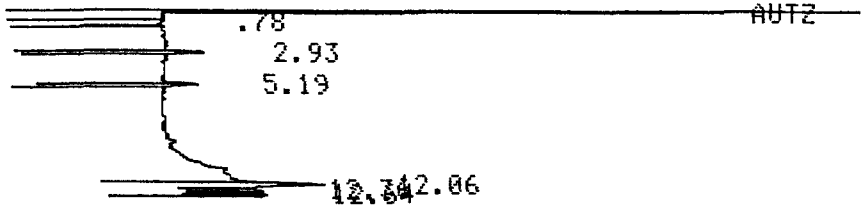
RUN TIME 13.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41418
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
2.96	1092	100.000000	
	1092	100.000000	TOTAL

SAMP ANALYSIS TIME DATE
42 PRESET 09:08:16 03:26:91



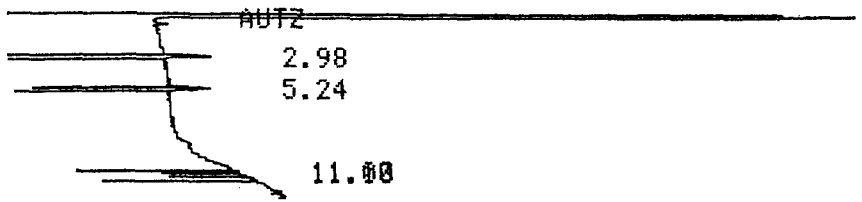
RUN TIME 13.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41420
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
.78	662	10.1053274	
2.93	1357	20.7143947	
5.19	1138	17.3713936	
12.06	1754	26.7745382	
12.36	1067	16.2875896	
12.64	573	8.7467562	
	6551	99.9999997	TOTAL

SAMP ANALYSIS TIME DATE
41 PRESET 08:40:59 03:26:91



RUN TIME 13.0

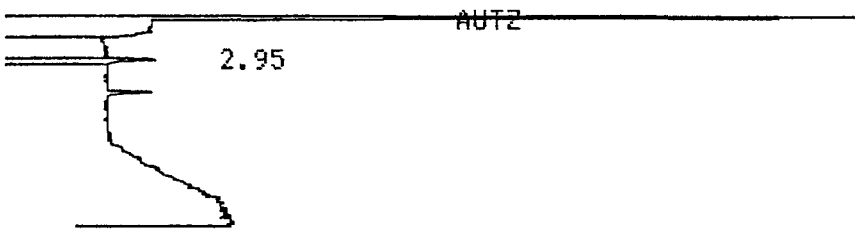
ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA		AREA%	NAME
2.98	1374		37.9662890	
5.24	963		26.6095606	
11.00	418	P	11.5501519	
11.13	864		23.8739983	
	3619		99.9999998	TOTAL

80

SAMP ANALYSIS TIME DATE
36 PRESET 15:01:29 03:25:91



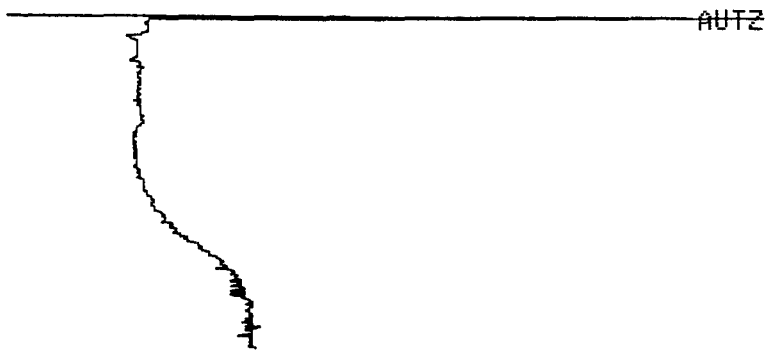
RUN TIME 14.7

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
BLANK
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
2.95	1214	100.000000	
	1214	100.000000	TOTAL

SAMP ANALYSIS TIME DATE
30 PRESET 12:00:44 03:21:91



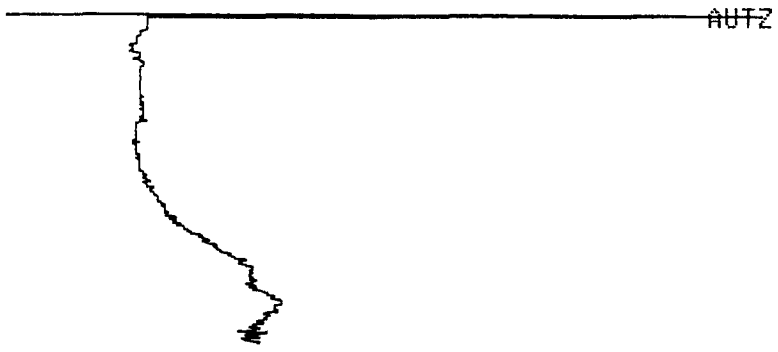
RUN TIME 23.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41423
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
29	PRESET	11:31:53	03:21:91



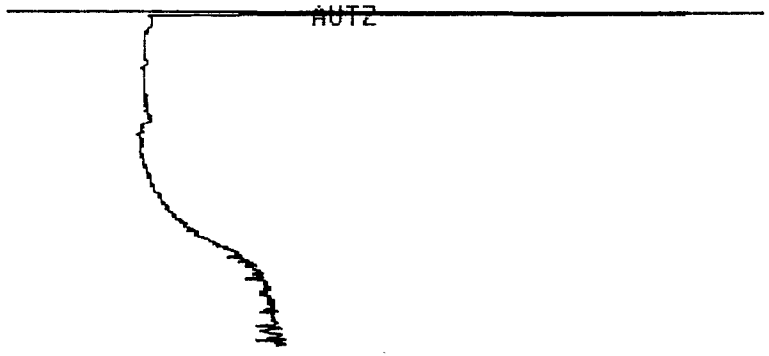
RUN TIME 23.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41424
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP ANALYSIS TIME DATE
28 PRESET 11:04:10 03:21:91



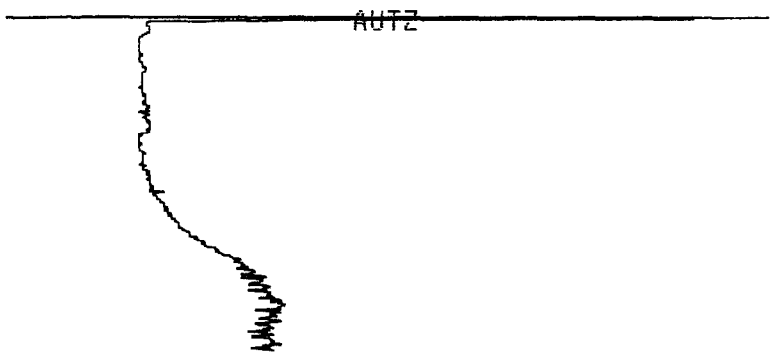
RUN TIME 23.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41425
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

SAMP	ANALYSIS	TIME	DATE
27	PRESET	10:00:42	03:21:91



RUN TIME 23.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
~~AR41413~~ 41422
VOL.(UL) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
	0	.00000000	TOTAL

PARAMETER	UNITS	METHOD	RESULT	LIMIT (1)
Viscosity (40°C)	Centistoke	D445	3.2	1.9 to 4.1
Distillation (90%)	Deg F	D86	634	540 to 640

Notes:

(1) Limits correspond to requirements for Diesel No. 2 (ASTM D975). The fuel is in satisfactory condition.

J. Roberto Ramírez, PHD

J. Roberto Ramírez, Phic. Eng

179979

QUANTUM LABORATORIES, INC.

ANALYTICAL SERVICES
G.P.O. BOX 361629 • SAN JUAN, PUERTO RICO 00936-1629
(809) 793-7288

April 9, 1991

PEDRO PANZARDI & ASSOCIATES
Attn: Eng. Nelson Reyes
PO BOX 2291
Hato Rey PR 00919-2291

A N A L Y S I S R E P O R T

SAMPLE DESCRIPTION:	Soil from former L.H. Caribe site at Vicks Dr. in Cayey
SAMPLE IDENTIFICATION:	41,493 North side of lot, 6 inches deep
DATE SAMPLE SUBMITTED:	March 5, 1991
SAMPLED BY:	F. Guzmán & J.R. Ramirez, Quantum Labs.
ANALYSIS REQUESTED:	Oil contamination

PARAMETER	UNITS	RESULT
BTEX	ppm	LT 1
TPH	ppm	LT 1

Note: BTEX (Benzene, Toluene, Ethylbenzene, Xylene) analysis was performed by a modified purge and trap followed by gas chromatography with PID. TPH (total petroleum hydrocarbons) were analyzed by Freon extraction and IR method.

J. Roberto Ramírez, PHD
J. Roberto Ramirez, PhD 7360.

ESTADO LIBRE ASOCIADO DE PUERTO RICO

87 79978

QUANTUM LABORATORIES, INC.

ANALYTICAL SERVICES
G.P.O. BOX 1629 • SAN JUAN, PUERTO RICO 00936
(809) 793-7288

SAMPLING LOG

Project Bacardi - Dickerson / L.H. Caribe Date 2/26/91

Sampler(s) M M Mann

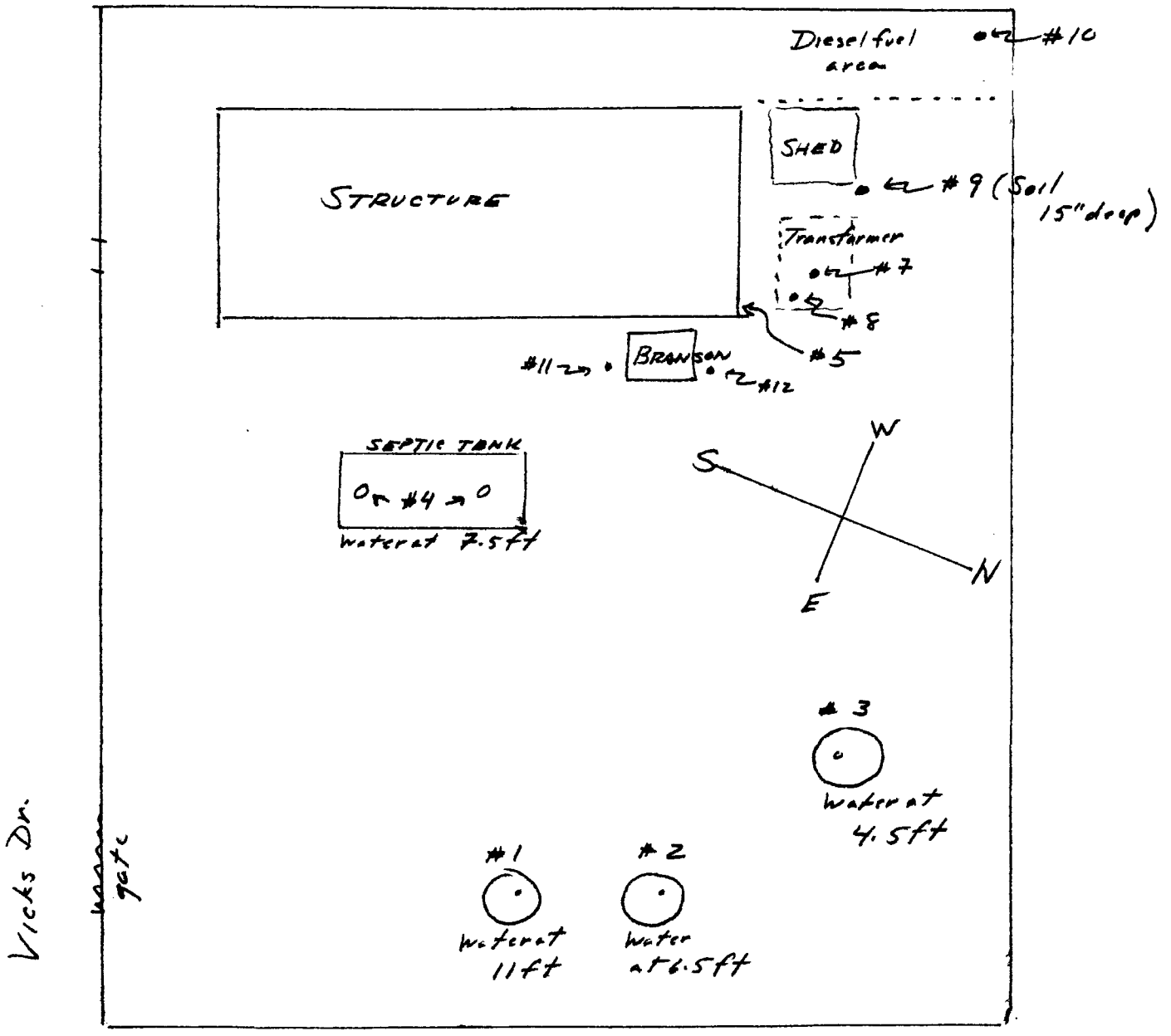
Project Location Cayey,

Field Samp. No.	Date	Time	Type	No. of Contain	Analysis
Injection Well #1, 11 ft Deep	2/26/91	9:40 AM	Grab	2+vial	TOC, COD, Solvents (41,418)
Injection Well, #2, 6.5 ft	2/26/91	10:00 AM	Grab	2+vial	" " " (41,419)
Injection well #3, 4.5 ft.	2/26/91	10:10 AM	Grab	2+vial	" " " (41,42
Sample #5, Fascia, 12 ft	2/26/91	10:05 AM	Grab	bag	Solvents (41,429
Waste Septic tank, 7.5 ft S. #4,	2/26/91	10:20 AM	Grab	2+vial	TOC, COD, Solvents (41,42
Sludge Septic tank #6	2/26/91	10:30	Grab	Jar	" " " (41,42
Transform Oil #7	2/26/91	10:45	Grab	plastic	PCB (41,426
Soil next to Transf #8	2/26/91	10:55	Grab	Jar	PCB (41,427
Soil #9	2/26/91	11:00	Grab	Jar	TOC, COD, solvents (41,4
Soil #10 next to tank	2/26/91	11:05	Grab	Jar	BTEX, TPH
Soil #11	2/26/91	11:20	Grab	Jar	TOC, COD solvents (41,42
Soil #12	2/26/91	11:25	Grab	Jar	TOC, COD solvents (41,4

Comments: See Nelson Cruz, PPEA

FORMER LH CARIBE SITE (BECTOR-DICKINSON)
COYEY

SAMPLE LOCATION



QUANTUM LABORATORIES, INC.

ANALYTICAL SERVICES
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(809) 793-7288

SAMPLING LOG

Project Becton-Dickinson Date March 5, 1991

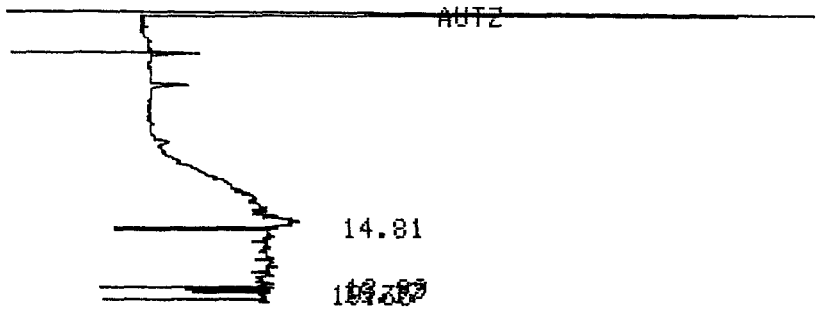
Sampler(s) J.R. Ramos / E. Guzman

Project Location Cayey

Field Samp. No.	Date	Time	Type	No. of Contain	Analysis
Dual tank - bottom	3/5/91	10:15 A	grab	1	
Dual tank - middle	3/5/91	10:20 A	grab	1	
Soil 6 in	3/5/91	10:30 A	grab	1	

Comments: Nuno / Reyes

SAMP	ANALYSIS	TIME	DATE
48	PRESET	12:01:49	03:26:91



RUN TIME 20.0

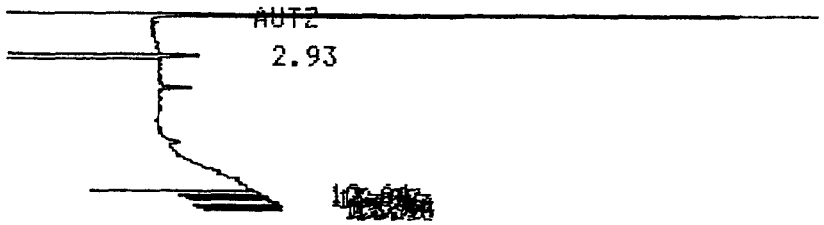
ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41424 WT.(G) 1.3995
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA		AREA%	NAME
14.81	998		31.8646232	
18.99	1123	P	35.8556832	
19.17	1001	S	31.9604086	
19.35	10		.3192848	
	3132		99.9999998	TOTAL

M1

SAMP	ANALYSIS	TIME	DATE
47	PRESET	11:33:02	03:26:91



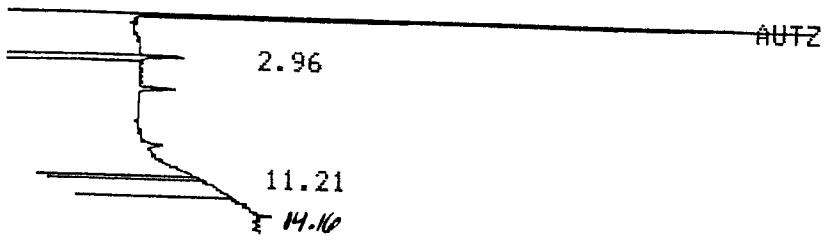
RUN TIME 14.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41425 WT.(G) 1.2768
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA		AREA%	NAME
2.93	1573		12.2260220	
12.64	1215		9.4434944	
12.89	820	P	6.3733872	
12.97	1353		10.5160889	
13.09	1106	P	8.5963003	
13.43	4281	P	33.2737447	
13.64	1375	P	10.6870822	
13.74	438	P	3.4043214	
13.80	437	P	3.3965490	
13.93	268		2.0830094	
	12866		99.9999995	TOTAL

SAMP	ANALYSIS	TIME	DATE
46	PRESET	11:03:39	03:26:91



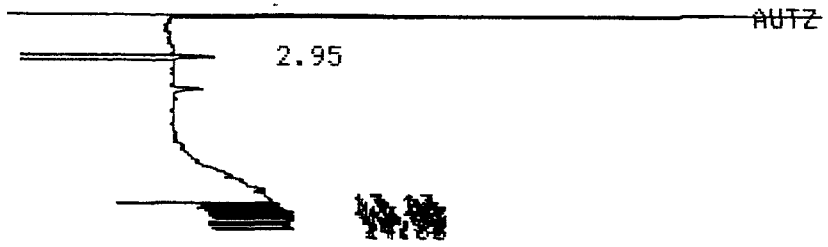
RUN TIME 15.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41423 WT.(G) 1.6413
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA	AREA%	NAME
2.96	1131	70.8646616	
11.21	465	29.1353383	
	1596	99.9999999	TOTAL

SAMP ANALYSIS TIME DATE
45 PRESET 10:26:36 03:26:91



RUN TIME 15.0

ANALYSIS OF SOLVENTS BY FID,GC
QUANTUM LABORATORIES,INC.
BY:LILLIAN G. RODRIGUEZ
41419
VOL.(ML) 5

INT1
NORMALIZATION METHOD

TIME	AREA		AREA%	NAME
2.95	1187		6.3909976	
13.17	1438	P	7.7424217	
13.24	1847	P	9.9445431	
13.50	913	P	4.9157378	
13.63	1023	P	5.5079954	
13.79	2018	P	10.8652344	
13.88	718	P	3.8658267	
13.95	1637	P	8.8138695	
14.13	1010	P	5.4380013	
14.31	2732	P	14.7095245	
14.52	1648	P	8.8730953	
14.79	1949	P	10.4937274	
14.88	453		2.4390243	
	18573		99.9999991	TOTAL